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ABSTRACT

The aims of this paper are to document the need for quality infant day care, to encourage the formation of a statewide policy for infant day care in Maryland, and to recommend specific components of that policy. Discussion refers to both family day care and center-based day care. After the first section's introductory presentation of data indicating the need for infant care, section 2 provides historical and background material on infant care and a brief overview of child development supplemented by lists of developmental milestones for children from birth to 5 years of age. Section 3 summarizes research on group care for infants. Recommendations are offered in section 4 in the areas of administration, funding, program provision, staffing, health concerns, parent participation, and employer-supported services. Section 5 explores research findings bearing on best practices in infant day care. Discussion focuses on (1) social development in the areas of attachment/separation anxiety, factors modifying children's responses to day care, and social behavior; (2) cognitive development; (3) health; and (4) the caregiver's role in the development of the child. Developmental milestones listed in the appendix are organized according to the following skill categories: cognition, communication, gross motor, fine motor, self-help, and social. (RH)

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CARE OF INFANTS IN GROUPS

A RESOURCE PAPER

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MARYLAND COMMITTEE FOR CHILDREN, INC.

CARE OF INFANTS IN GROUPS:

A Resource Paper

Prepared by the Infant Care Sub-Committee
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February, 1984

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CARE OF INFANTS IN GROUPS

I INTRODUCTION

The scarcity of nurturing day care for infants in group settings has triggered many child advocates at federal and state levels to lobby for increases in funding for programs serving infants. The issue of day care for infants is not without controversy however. All advocates agree that the care of infants is significantly different from the care given to children over the age of three. Some argue that group care of infants may be harmful, though there are no conclusive data to support this perception. The reality is that the need for child day care for infants is increasing dramatically. Fewer families can economically afford one parent to remain at home to care for an infant. The need for infant day care is even greater in light of the significant increase over the last decade in single parent families.

There is little consensus regarding many issues of infant day care in group settings: as a result, there is an inevitable lack of proven practices and program models. There is a need for concerted effort at all levels of government and among advocates to ensure the availability of services which meet the highest quality standards, and the formation of policy to develop such programs. This paper is intended to document the need for quality infant day care, to encourage the formation of a statewide policy for infant day care, and to recommend specific components of that policy.

Professionals, paraprofessionals, parents and others concerned with the care of infants in group settings should find this paper helpful, as well as legislators and those responsible for setting social policy in private and public agencies.

There are several limitations inherent in this paper which include: 1) the focus is limited to children from birth to age three, and 2) there is a paucity of carefully conducted studies on day care <u>for</u> infants. Research on day care for infants generally does not specify the birth order of the children within the study, the economic level of the children, or the background of the children. Also, much of the literature does not refer to the standards which are in effect in the day care center.

For the purpose of this paper, the discussion of care will refer to both family day care and center based day care. The following recommendations would apply to both.

The care of infants in groups has been necessitated by several major factors:

Increases in the number of working mothers

Increases in the number of single parent families

Decreases in the number of extended families

Data collected from census reports in Maryland localize the need for infant care.

- In the 1980 Census, Maryland had 1,094,386 households. Only 10% of those included no workers, 32% had 1 worker, and 58% included 2 or more. Only 4% of Maryland households receive public assistance (PA); nationally an average of 62% of PA households have earned income each year.

- In the 1980 Census, 920,579 Maryland women were in the work force. 111,724 of these women were divorced. 117,155 women with children under 6 are included in the 900,000 working. 113,223 women with children under 6 are not working.

- In 1980, 59,833 babies were born to Maryland residents; births have increased by at least 1,000 per year since 1976 when 52,672 children were born. Approximately 1 of every 4 babies born in Maryland is born to an unmarried woman. In light of the low percentage of Maryland households which receive public assistance, it is likely that many of these women enter the work force or return to school at least part time.

- About 5,000 Registered Family Day Care Homes exist in Maryland. Each home may care for up to 6 children. Family Day Care Providers may not care for more than 2 children under 2 at any one time. Even if all slots available to infants were used, only 10,000 slots would exist.

It is clear that there is a present need for infant day care in Maryland. There are presently many more children under 6 with working mothers than there are regulated day care slots. We know that the number of women entering the work force has increased each year since World War II; the present high cost of living makes it increasingly likely that women will continue to enter or re-enter the work force shortly after giving birth.

II. BACKGROUND

Historical Perspective

Concern for the physical, emotional, social and intellectual welfare of infants cared for in groups has derived from observations of the effects of complete maternal deprivation upon young children. Observations of these effects were made as early as 1909. A number of studies of maternal deprivation conducted between 1930 and 1940 culminated in the publication of the 1951 World Health Organizations classic report and survey of the literature, "Maternal Care and Mental Health" by John Bowlby, (1951).

The report dealt with the effects of maternal deprivation varying in degrees of separation and deprivation. The research was conducted primarily in child care residential institutions where children were orphaned or were separated from their parents. No mother substitutes were provided. The findings indicated that infants languished, or became emaciated and died in sterile, unfriendly surroundings. When children survived, they did so at terrible expense to their mental health.

Although some of the literature reported that the effects of separation from the mother figure for day care were favorable as compared with separation for residential care, the effects of complete maternal deprivation were quickly associated with nearly all types of maternal separations. The association of deprivation with separation of any kind affected child welfare agency policy with respect to placing infants in family day care homes (Willner, 1965).

Subsequently, maternal separation was studied apart from maternal deprivation and further distinction made between the two phenonema (Yarrow, 1962). While separation from the mother figure was seen always as having meaning and significance for the child, and always ill effects when a child is institutionalized, most investigators concluded that separation was not necessarily harmful.

Multiple mothering was another concept developed in the context of residential institutional care and was also associated with maternal deprivation. However, the effects of multiple mothering upon children outside of the context of institutional care were also modified to suggest that it was not necessarily damaging. Margaret Mead, in a less damning statement, asserted that "cross cultural studies suggest that adjustment is most facilitated if the child is cared for by many warm friendly people" (Mead, 1954).

Today, the concept of bonding between mother and infant once again raises the specter of maternal deprivation when

mother and infant are separated even though bonding implies an almost immaculate two way process much like "imprinting". However, for purposes of examining the pros and cons of infant group day care, this specter must be considered outside of the context of institutional care, at a time when mothers and infants are routinely separated during the day.

For social policy makers, parents and providers of care, maternal deprivation, maternal separation, multiple mothering and infant-mother (parent) bonding remain concepts and issues of great concern when contemplating a way of life for infants that includes daily group care.

Overview of Child Development

During the first five years of life, children are involved in a process of rapid growth and development. Biological maturation and the integration of learning experiences result in the development of skills in many areas. Each child's development proceeds through a sequence of stages, and the rate at which children progress through these stages varies, depending upon genetic, biological, and environmental influences, including any handicapping condition. It has become increasingly evident that environmental factors, such as patterns of interactions between caregivers and infants and the amount, nature, and quality of environmental stimulation from persons and objects, also play important roles in influencing the early development of the child (Ramey, 1980).

The pattern of interaction commonly known as "bonding" (Stone, 1979) develops as a result of nurturing experiences between a child and a significant person. It is facilitated by continually meeting a child's desires and needs. In turn, bonding helps the caregiver to perceive the child's cues as to the needs, interests, readiness for learning, and style of learning. The accurate interpretation of, and appropriate response to, such cues by parents, or parent substitutes ultimately enhance the child's growth and development. Unrealistic expectations and lack of understanding of the child's abilities and needs hinder bonding.

From birth to age three, changes occur in a child's ability to control body movements, master the emotional tasks of infancy and early childhood, apply cognitive skills, use language, gain a sense of identity, and get along with people. Patterns and processes in these areas are interrelated and interdependent. One area cannot be understood without considering the functioning of the others. The development of language facilitates cognition; sensorimotor acts lead to

cognition and language; and development of perceptual capacities influences the development of self-concept. The growth of a sense of trust in the adults around him and the development of mutual responsiveness leads to increases in a child's ability to communicate with others and control his environment through language and his feelings of self-worth and effectiveness increase. The development of cognitive skills and feelings of self-accomplishment facilitate feelings of "I can" in a child, which encourage the seeking of new experiences.

The manner in which skill areas are most obviously combined can be observed in children's play. Piaget referred to play as "the work of children". It is their opportunity to explore the environment and test new ideas. Children learn to integrate skills, learn roles, establish coping behaviors, and develop a sense of their own abilities through constructive play. Inherent in the process of play is the development of social skills such as compromise and sharing, Play should not be considered an isolated activity. Cognitive, motor, social and language skills occur and develop naturally in an atmosphere of adult approval and support.

In the first year of life, children regard themselves as the center of their environment. They are controlled by their physical and emotional needs and build a sense of trust and security as these needs are satisfied. The primary source of satisfaction in early infancy is the caregiver, who represents "the world". It is through this important attachment that the child discovers himself and the world outside (Gordon, 1977).

Additionally, each learning experience is based upon previously learned behaviors which have been practiced, modified, and repeated many times as the infant explores his/her environment. From this process, the infant becomes aware of the possibility of controlling the immediate environment. At first, the environment is the body. As the child masters repetitive body actions, he begins to coordinate body action with objects. The development of hand manipulation skills is a good example of this. The child spends a great deal of time exploring and playing with the fingers before combining that skill with the increased ability to perceive and reach objects. At six to eight months of age, a child who is developing normally has combined and refined all of the skills which enable him to reach for, obtain, and manipulate toys. The infant has already learned to distinguish between mother, father and others and has become aware of the distinction between objects and people. Interacting with people and objects in a positive way provides vital learning experiences which should be encouraged. Appropriate guidance and encouragement in a setting which invites exploration motivate the infant to expand experiences.

At the end of the first year, exploratory behavior made possible by locomotion allows a child to begin to establish an important emotional and physical independence. In the next two years, children greatly expand their communication system. As they interact with the environment, they use communication to accomplish their own objectives. As children approach two and a half they settle into a new phase of control. They are more certain of their capabilities and their independence from some parental demands as they increase their decision-making abilities. They have learned to cope with cultural expectations, such as feeding and toilet training, and show a powerful striving toward independence.

The lists found in the appendix to this paper delineate developmental milestones for children from birth to five years. They have been further divided into the areas of gross and fine motor skills, communication, cognition, self-help, and social development. There may be considerable variation in the rates at which children progress in their development. Therefore the reader is cautioned in the interpretation of a child's level of development. Developmental norms are intended to provide a framework for conceptually organizing the types of occurrences that can be expected as children develop. However, they are not static or fixed concepts.

III. SUMMARY OF RESEARCH

In reviewing the research on group day care for infants the conclusion can safely be drawn that day care does not have a negative effect on the development of a child if quality day care is provided in concert with a commitment to support the child's family. It is not a question of where a child is reared, but of how the child is cared for. A definition of quality care, regardless of type of setting, according to Keister is care for children which would allow them to live a life that "has more order than chaos, more encouragement than scolding; more action than blandness". All day care is not the same, but if the daily experiences provided in any environment are stimulating and rewarding then children will develop. Sally Provence in the Guide for the Care of Infants in Groups helped to identify many of the requirements we have included in this paper.

The following variables are important in establishing and maintaining high quality day care for infants:

- staff to child ratio of 1 caregiver to 3 children
- a low overall group size
- assignment of a caregiver to each child to increase the likelihood of effective communication
- caregivers with experience and formal child care training who are affectionate, responsive, familiar and stable
- a commitment to meet physical, nutritional, health and safety needs of the infant
- a home-like environment with sufficient space for each child and a variety of play toys and materials
- a supportive relationship between parents and caregivers. It is particularly important that the caregiver be sensitive to the feelings and needs of working parents who may experience some ambivalence about leaving the child in the care of others.

The role of caregivers in day care is a most important one. For infants, they help to foster a basic trust in the world around them and a secure bond between infant and mother (primary caregiver). For toddlers, they help to provide opportunities with their peers for social interaction and growth, at the same time providing guidance in learning the rules of social conduct and self control. When caregivers create situations for learning through play and social interaction and are responsive, sensitive to individual differences,

affectionate and less restrictive the day care child will be emotionally secure and intellectually capable.

The quality of the "bond" between the mother (primary caretaker) and the child is not affected by quality care. The periods of enrollment and separation and stranger anxiety (natural stages in a child's development) can be less stressful when the caregiver and parents are sensitive to what the child is experiencing and help to ease him through these emotional and trying times. To strengthen the relationship between caregiver and child, and thereby enhance his development, it is suggested that an individual caregiver be assigned to each infant.

The way in which a child adjusts to day care can be modified by factors totally independent of the day care setting - his age, ordinal position, sex, temperament, prior experience, family characteristics and his relationship with parents and the effect of maternal employment on him.

The social behavior of many day care children is often described as being aggressive and uncooperative, with the most detrimental effects on children enrolled in day care since infancy. But, again, in quality care programs exhibiting a large amount of caregiver/child verbal and affectionate interactions and rules for social conduct (especially for toddlers who exhibit natural aggression), the social behavior of day care children is not negatively affected - in fact it may even be enhanced. Many researchers and mothers see the children as being more self-confident, less shy with adults, more assertive and able to make their own decisions at earlier ages than home-reared children. The interactions with peers is positively affected - to the point that peer group stability is a factor in a child's feelings about day care.

The cognitive development of a child is also not negatively affected in a quality care setting. Day care children do at least as well as those reared at home with significant increases in cognitive abilities exhibited by children from home environments where intellectual development is not facilitated.

A child's cognitive and social development may be determined more by the characteristics of his family than his day care environment. In addition Kagan cites that "children from intact and psychologically supporting families who experience surrogate care during infancy and early childhood, resemble home-reared children from their own social and ethnic groups to a greater degree than they do children of other group and class backgrounds who are in the same extrafamilial environment". This is a point often overlooked in considering and selecting the groups of children studied in

the research on the effects of day care.

With concerted effort by all levels of government and among child care advocates, the availability of day care services for all families can be ensured and the highest standards for quality day care can be achieved.

In the area of health in the day care setting, there is a risk of infection for young children and their caregivers but the risk can be reduced by appropriate use of preventive measures. Better education of health professionals, day care providers, licensing staff and parents can improve the quality of life for day care users, caregivers and families.

Day-care centers could serve potentially as a basic unit in a national program of immunization and improved dental care and perhaps for a national program of screening for early detection of diseases and handicapped conditions.

IV. RECOMMENDATIONS

The demand for and availability of group care for infants has increased dramatically in recent years. Group care for infants does and will continue to exist. Recognizing this, the Maryland Committee for Children makes the following recommendations, acknowledging that this list is not complete.

A. Administration

1. Refinement of statewide policies governing care of infants in group settings

2. Coordination among agencies responsible for writing regulations and purchasing services

3. Careful evaluation of potential providers and sites with regular monitoring after approval

4. Strong outreach programs to providers and potential providers for information and training

B. Funding

1. Increased public and private funding for the purchase of child care services

2. Increased public and private funding for research and development of proven practices

3. Increased public and private funding for regulation, monitoring and training

C. Program

1. Services be designed to accommodate the unique needs of parents and children

2. Provision, for easier adjustment of children, for:

   a. Half-day care prior to full-day care

   b. Staggered admissions to allow caregivers more time for each new arrival

   c. Extended visitation by parents staying with child during the first few days

   d. Home-like environment with a child's cuddly toy and a picture of his parents

3. Age appropriate toys and supplies

4. Ample opportunities for interactions among peers

5. Integration of meaningful learning activities into the schedule

6. Planned curriculum designed for the age, interests and abilities of the child(ren)

7. Availability of substitute caregivers

8. Routine methods for communicating schedule, special occurrences and child's progress to the parents

D. Staff

1. Characteristics - responsive, caring, patient

2. Low ratio of staff to child (1:3)

3. Low ceiling on group size

4. Assignment of individual caregiver to each child

5. Familiarity with culture and background of children

6. Effective communication skills, both verbal and non-verbal

7. Sensitivity to needs of parents including those particularly related to working parents

8. Knowledge of child development

   a. Consider both child care experience and training and formal academic education when selecting staff

9. Caregivers regard themselves as assistants to parents and encourage a positive secure attachment between parent and child

10. During periods of protest behavior, caregivers should

    a. minimize the use of students, substitutes and changing peers

    b. be encouraged to be more objective in their responses and remain calm and at ease

c. be offered continual in-service training

d. use informational/procedural training packets where appropriate

11. Use of schedule board for feeding, medication and nap times and as aid to staff communication for substitute caregivers and changing shifts

E. Health

1. Tight supervision by Health Department of health care practices (including food program and environmental safety hazards)

2. Written emergency procedures and health guidelines

3. Provide:

a. nutritious and balanced meals and snacks

b. fluids frequently

c. rest time with adequate space

d. daily exercise

e. fresh air both indoors and outdoors, ventilating room year round

f. clean and separate areas for diapering, and playing and eating

g. requirement to clean hands before handling food, eating or drinking and after toilet/diapering related activities

h. separate area for ill child

4. Maintain log of each child's pediatrician in event of an emergency

5. Seek health professional advice whenever questions on possible illness arise

6. Keep all immunization records

F. Parental Involvement

1. Existence of emotional tie between mother (primary caretaker) and child prior to enrollment

2. Make time with children quality time

3. Make a conspicuous bridge between home and day care by:

   a. being well-acquainted with caregivers and other children

   b. asking questions about days events (may need to trigger child's memory)

   c. walking into the center/home with child; discussing any events/problems which may be helpful for caregiver to know

   d. having lunch with child when possible if suggested

   e. reading and becoming familiar with written schedule

4. Help providers to plan programs - be certain goals are compatible

5. Observe prior to enrollment for above section's listings, for pleasant home-like environment and for quality of caregiver/child interactions

6. Accommodate nursing mothers

G. Other

1. Employers should be encouraged to provide on site day care, or day care benefits, resource and referral systems or otherwise support employees in their efforts to meet child care needs.

V. RESEARCH AND BEST PRACTICES

The research on infant day care can be divided into the areas of social and emotional development, cognitive development and health. Since the physical development of a child has not been found to be affected by day care, research concentrates on the areas of social and cognitive development. For the purpose of this paper, day care refers to services rendered to a child and family away from the child's residence.

SOCIAL DEVELOPMENT

Attachment/Separation Anxiety

A review of the literature suggests that day care children develop emotional bonds in the same way and at the same rate as children reared in the home (Rutter, 1981). The period of development known as "separation anxiety" (which is often used interchangeably with "stranger anxiety") marks the attainment of higher levels of cognitive and emotional development. Increased long-term memory ability allows the infant to compare present with past experiences to then understand or label a situation as "strange" (Rodriguez and Hignett, 1981). The developmental course of separation anxiety is similar for both home reared and day care children. This applies to children who experience day-care for the first time between ages 2-3, when it is assumed the parent-child bond has been established, and for those who attend from the first 12 months of life, when the primary attachment is still forming (Rutter, 1981). These positive outcomes of day care care are reflective of centers with above average quality care and families which are non-deprived and stable (Rutter, 1981).

During initial placement in day care, infants and toddlers exhibit a period of protest; infants cry and toddlers cling to the parent. Minor disruptions in eating and napping schedules occur as well as a slight increase in fussiness. Within the first few months, these expected signs disappear (Rodriguez, 1981). In the periods of adjustment referred to as "stranger/separation anxiety", six to twelve months and sixteen to twenty-two months, the child who has already adjusted and been doing fine, may be reluctant to leave his mother, be increasingly demanding of his caregiver, be fussy and be wary of strangers (as seen in Ainsworth's Strange Situation Test and witnessed by caregivers and mothers). This type of behavior again disappears (Rodriguez and Hignett, 1981). Providing a home-like environment complete with a child's favorite cuddly toy and even photos of his parents can help decrease separation anxiety and distress and allow for greater continuity in the child's world (Schwarz, 1979).

Research (Strange Situation Test) to determine whether the child's main attachment is to the parent or to the caregiver,

a concern of many, finds that children show more distress when separated from their mothers than from their day caregivers, are more likely to go to their mothers than to caregivers and are more responsive to reunions with their mothers.

Questions have also been raised regarding the quality of the attachment between the children in day care and their mothers. Blehar's studies (1974) suggesting that the attachments may in fact be more insecure than those between home-reared children and their mothers have been contested. Her testing was conducted soon after enrollment of two to three year olds, not allowing for an anticipated adjustment period. In addition, the study included more first born children who usually demonstrate more adverse responses to separation. Studies conducted by Portnoy and Simmons, of children starting day care at 1 and 3 years of age, show no difference from home care children. Rutter (1981) points out that although most young children do not become overtly insecure and anxious as a result of day care, it is possible that more subtle ill effects occur in some children, but he does not cite the effects. Belsky (1983) suggests that low quality care may lead to the development of avoidant attachment relationships. In addition, the quality of day care affects both the security of the emotional ties with the parents, and the caregiver.

Studies conducted on children's behavior during the week preceding enrollment have found the children to be more anxious and insecure than home-reared children. Within the first few months after placement, there is no difference between the two groups (Rodriguez and Hignett, 1981) It is unclear if these pre-admission findings represent a difference in prior characteristics of the families and the children and/or anticipatory anxiety about new experiences. Many researchers cite the need for more studies comparing the pre-admission behavior of day care children to a home-reared group.

The periods of protest behavior can create feelings of inadequacy on the part of the caregiver and doubts as to the appropriateness of placement by parents. It is necessary for both caregivers and parents to remember that the child is reacting to internal stresses and not necessarily to them or their style of care.

Factors which help to insure regularity that the child can anticipate and influence, greater self-confidence and a more enjoyable working environment for the caregivers and reassurance of a selection of a quality program for the parents are listed in the recommendation section.

Modifying Factors of Responses to Day Care

Several factors can modify a child's reaction to day care:

1. Age
2. Birth Order
3. Sex
4. Temperament
5. Prior experience
6. Relationship with parent
7. Maternal Employment
8. Family Characteristics

(Crouter, 1982); (Lansburgh, 1982); (Rutter, 1981)

Evidence is lacking to support the theory that day care may be more stressful for infants under two and one-half to three (before periods of separation and stranger anxiety have ended) than for the older preschool child. It is known that children's responses to peers change with increasing age. Peer interactions and reciprocal social behavior are more frequent among toddlers than infants and among three to five year olds than among toddlers. Therefore, toddlers can to some extent take advantage of peer group opportunities provided in a day care environment. (The importance of peers will be discussed in the next section.)

The birth order of the child is also a modifying factor. Parents tend to interact differently with their first born than with their later born children; first born children are not used to sharing mother (their primary caretaker) with other children.

Several studies have shown that effects of day care on boys are more marked and somewhat different than are the effects on girls. Day care boys are found to function more independently in the mother's presence and to cry and show resistance and avoidance of strangers (Rutter, 1981). Research shows that in low income families the money earned by the mother was so important to the family income that it offset negative effects on the sons. Crouter (1982) found that girls admire their mothers, have a positive view of being female (age of girls was not indicated) and are more independent than peers at home.

Another variable requiring more investigation is a child's temperament. There is a growing body of evidence indicating the importance of temperamental differences in relation to various aspects of psychosocial development and of responses to stress. Although some infants are easy to handle and adjust easily to change, some are extremely upset by any noise, unexpected occurrence, or unfamiliar setting or people (Lansburgh, 1982). However, little is known regarding the importance of a child's temperament with respect to his adjustment to day care.

Children's prior experiences of unhappy and happy separation and interaction with peers and siblings might also influence

their responses to day care.

Other factors to consider are the nature of the child's relationship with his own parents and the family characteristics. The possibility exists that a child with an "insecure attachment" (whether as a result of his own temperament and/or the quality of his upbringing) might be more vulnerable to adverse effects of day care. Studies show that an increase in the child's fearfulness may be due to frequent changes in substitute care and/or generally unstable family circumstances. Family characteristics include social, ethnic and economic backgrounds and marital circumstances (the last two of which may determine if a woman has to work or wants to work), and especially modes of interaction with people and their responsibility to the baby.

One factor which has been explored is the effect of the mother working on her child. Inherent in this issue is the effect of having a job outside the home on the mother's self-esteem, the consequences of having two working parents and the quality of the parent-child interactions. The effect of maternal employment on the family is dependent upon whether the mother wants to be working and upon her job satisfaction (Lansburgh, 1982). A mother's (parent's) working will not necessarily reduce the amount of exclusive intensive parent-child interaction. Working parents may more likely arrange for uninterrupted time to play and talk with their children - or, their working could mean that involvement in a job outside the home reduces their interest in the children (Rutter, 1981). Maternal employment, therefore, can effect the quality of the mother's "bond" with the child and the child's feelings of security, which can directly influence the child's response to day care.

Social Behavior

In centers where the group size was large and the care-giver to infant ratio was 1 to 8 there were serious behavioral consequences for the children. Farran describes the children enrolled in such programs as being more active, more aggressive, more easily frustrated, less cooperative with adults, more distractable and less task oriented than home-reared children. In his view they had not developed self-control, had not learned to persist in activities alone and were ready to fight to resolve difficulties. Children, in another study of center care, spent more time consoling themselves with self-directed repetitive mannerisms such as thumb or finger sucking, nose-picking and hair-twirling than did those in their own or family day care homes (Tyler and Dittman, 1980).

Children's interactions with adults can be affected by day care. Findings by Schwarz concur with Farran's that children experiencing day care since infancy were significantly less cooperative and more physically and verbally

abusive with adults. However, findings of a Chicago study indicate just the opposite - children attending day care centers are likely to be more self-confident, self-assured and assertive with adults. Though not always as polite or obedient as home care children, they are more likely to be cooperative and helpful to parents when the situation requires it (Clarke-Stewart, 1981). Rutter's studies also indicate that day care children display mature social behavior with adults. Mothers of day care children see them as being less shy with adults.

Schwarz concludes that an early start in day care (as seen in her study) resulted in some differences in the style of social interactions in the children, although he believes this did not amount to maladjustment. The differences could be a consequence of the characteristics of the families using day care rather than of the day care, itself. In addition, many of the changes in social interaction that take place during the preschool years seem to be largely a function of maturation and of peer group experiences, rather than specifically home or day care (Rutter, 1981).

In interactions with their peers, day care children were less apprehensive than home-reared children about playing with an unfamiliar child. In one study this difference was found to disappear at 29 months. (This difference in some research is found between center care children, and those attending family day care programs or reared at home). Since the situation of peer interaction is less novel for day care children, they are better able to take advantage of peer group opportunities (Rutter, 1981). An increasing number of studies indicate the need for peer group stability in allowing for adjustment to and satisfaction with day care (Rutter, 1981; Tyler and Dittman, 1980).

Other social behaviors of day care children as compared with home reared children are also notable. In unfamiliar settings many are more independent and at ease. They are more assertive and more willing to stand up for their rights. When starting school, they are better adjusted, persist more at tasks and are more likely to be leaders, though all children catch up after a few years. Mothers of day care children see them as being more patient and able to make their own choices and dress themselves at earlier ages. However, in some day care homes and centers, little effort is made to allow toddlers to grow towards independence and they are allowed to have bottles and stay in diapers longer than necessary. By handling the children in assembly line fashion, caregivers save time and effort with little individual attention given to each child (Tyler and Dittman, 1980).

Of great concern to parents and caregivers is the more

aggressive and boisterous behavior of day care children. Aggression is a natural social behavior of children under 3, but the greater aggressiveness of children who begin day care in infancy may be due to 1) a more permissive attitude toward aggression in the day care setting than the home, 2) greater independence or, alternatively, a behavioral pattern of concern among the children, 3) caregivers who did not intervene when necessary and 4) the amount of time spent in group situations that do not fulfill social needs the way a one to one parent/child relationship does. One study found teacher training effective in helping children to be less aggressive. It must be noted here that the standard in effect in the centers studied in this research, including group size, adult child ratios, and staff training and experience are not known.

In consideration of all the above reasons for negative behavior along with the knowledge of an infant's needs for emotional bonds and the findings that day care children become socialized to their peers, researchers point to the following implications for day care. Caregiver ratio and overall group size are important for younger children who need a small group so that they can have more interactions with a limited number of caregivers. Caregivers need time to interact with each child on an individual basis in order to provide adult guidance regarding the rules for social conduct. The rules of conduct need to be consistent, an objective which is easier to achieve with a limited number of caregivers. When unacceptable behavior occurs, it must be talked about as soon as possible to have a positive effect. When caregivers make systematic attempts to control behavior, results can be seen. Small group size also allows for greater peer interactions which becomes increasingly important for toddlers. In addition, parent involvement can help to avoid some of day care's negative consequences. This is discussed further in the recommendation section.

The consequences of day care on a child's social development (and in cognitive development too, as will be discussed) depends on the quality, consistency and overall pattern of substitute care. When caregivers make systematic attempts to control behavior, results can be seen. Caregiver/child ratio, group size, peer group consistency, caregiver consistency (discussed in another section), and parents' contentment with their selection as well as characteristics of the family are of utmost importance in determining the day care child's social behavior.

COGNITIVE DEVELOPMENT

In addition to a child's basic needs to establish and perpetuate a close emotional bond and to learn rules for interacting with others (conscience), is the need to learn specific information as well as the strategies for learning other information independently of parents (Farran, 1982). Infants and children actively and selectively respond to people and to the world around them by: 1) processing information, 2) altering their immediate environment, 3) seeking out and perpetuating experiences that nourish learning; and 4) struggling for mastery against obstacles. They literally learn by doing. Children whose basic need for a strong emotional tie is unfulfilled neither learn well nor thrive in any other way (Escalona, 1981).

The New York City Infant Day Care Study found differences in cognitive abilities between children attending family day care homes and those attending larger group centers. At twelve months of age, infants in family day care had slightly higher cognitive and linguistic functioning. At eighteen months, there was no difference between the two groups. By age three, children in group day care scored higher. At twelve months, the increased abilities may be due to a higher level of verbalizing in the family day care home than at the center (Caldwell and Freyer, 1982). The NYC Infant Day Care Study recommends that after age two center care be preferred. The study found that at this age the group adds a level of intellectual development missing in a smaller setting. This may be due to a better-trained staff using more direct teaching and the child's ability to take advantage of his peers. Overall group size and caregiver/child ratio still remain important (Caldwell and Freyer, 1982), (Belsky, 1983).

The majority of research on the effects of day care on cognitive development centers on the differing socio-economic background of children. Although social class does not significantly affect development during the first year, it has been found that learning or cognitive development of the kind most useful for success in school is not facilitated in home environments provided by many poor families (Escalona, 1981).

Children from lower socio-economic groups who are in day care do better than their peers from the same groups raised at home in tests of verbal fluency, memory, language comprehension and problem solving. They are more independent, know more about their environment and ask more questions (Clarke-Stewart, 1982). Longitudinal studies by Weikert (1982) find that economically disadvantaged children enrolled in preschool programs have lower delinquency rates, higher academic performance and better earnings prospects. Experience of Head

Start, The Perry Pre-School Project conducted by High Scope (Weikert, 1982), and other preschool intervention programs have shown that the cognitive gains depended more on the degree to which parents were actively involved with and influenced by the program than upon the particular program content or style (Escalona, 1981).

The fear of day care being detrimental to intellectual development can be allayed: children in day care do at least as well as those at home. This occurs provided children are offered organized educational activities in a caring supportive environment. Lansburgh (1982) cites that while day care has proven to be constructive for poverty children, the difference for children from middle class homes is not as marked. But, in a quality program the middle class child's IQ can be maintained or increased. The gains in intellectual performance increase the longer the child is in day care, throughout the preschool period. Soon after the start of elementary school, most home care children catch up with their classmates who have attended a day-care center or nursery school (Clarke-Stewart, 1982).

HEALTH

Recent research studies on health in day care settings tend to focus on outbreaks of infectious disease rather than on the usual state of health among day care users. The possibility of serious consequences for children, caretakers and families has called for careful examination of day care settings in regard to the transmission of diseases. (Aronson, 1983).

All day care activities provide close physical interaction among children and adults - diapering, toileting, eating, hugging, kissing, sharing toys, playing at water table and with moist art supplies. These physical interactions are excellent transport routes for infectious disease agents such as virus, bacteria and parasites which thrive in wet, warm environments. Children's bodies, their perspiration, nasal discharge and stool provide such environments for transport of infectious disease agents (Aronson, 1983).

In addition to being excellent transportation systems, young children's bodies have few barriers to the transmission of infectious disease. They lack immunity to many common infectious diseases. Their vulnerability to disease is increased by the short distances between body locations where infectious agents can reside and areas where they can cause disease. Children have small structures which are easily blocked and infected (e.g. middle ear space to nose and throat area). Further increased risks result from the normal behavior of children - mouthing objects which may be unclean, playing in sand, dirt and other sites where

animals defecate and deposit parasite eggs, handling bodily wastes, and by being bumped, bruised, scraped and injured - which provides entry of infectious agents into their bodies (Aronson, 1983).

Two types of diseases are the most common infectious diseases among children at home and in day care. Respiratory infections (runny noses, ear infections, lower respiratory infection) account for the majority, followed by gastrointestinal diseases.

Research on the occurrence of respiratory illnesses provide evidence that there is no cause for alarm about the risk to children in day care settings.

- Children aged 1 to 5 raised at home in families with more than one child had the same incidence of infection as children attending day care - 6 - 8 respiratory illnesses per year.

- For infants under 1 in day care centers data show 9.6 illnesses per year to a little less than 7 for children at home.

- The only difference found to be related to center size was the incidence of runny noses - children in large centers (over 50 children) had runny noses 40% of time; in small centers (18 - 26 children), 26% of the time.

No statistics are given on centers or family day care homes with less than 18 children. Overall, except for infants under 12 months of age and a greater incidence of runny noses in large centers, children reared at home have the same number and type of respiratory infections as those who receive care in family day care homes or in day care centers (Sharp and Loda, 1982).

Gastrointestinal diseases include diarrhea and those diseases, such as hepatitis, which are transmitted by contact with objects contaminated by infected stool. Day care centers which care for infants and toddlers have the greatest risk of outbreaks of gastrointestinal disease. Interaction among groups of children, poor hand-washing techniques and inadequate attention to contaminated surfaces predispose them to outbreaks.

Another group of infectious diseases include those which are preventable through immunization: measles, mumps, rubella, whooping cough, diptheria and tetanus. Other systemic diseases such as chicken pox are not presently preventable, but management of the symptoms to avoid complications can be achieved by education of parents and consultations with professionals.

Both the physical and mental well-being of infants and toddlers are affected by even a brief illness. The psychological effects are the most difficult to assess. For caregivers, mildly ill infants are irritable and require much time and attention, leaving the caregiver little incentive to do special activities.

There is a risk of infection for young children and their caregivers in a day care setting, but the risk can be reduced by appropriate use of preventive measures. These appear in the recommendation section. Better education of health professionals, day care providers, state licensing staff and parents can improve the quality of life for day care users, caregivers and families (Highberger and Boynton, 1983).

The question of allowing an ill child to attend his day care program has also been researched. Most health specialists believe that excluding the child from the program is not necessary to reduce the spread of illness (Loda, 1982). The entire group of children will have been exposed to the infection before the child develops symptoms. Since the majority of acute infectious diseases are transmitted immediately before the child develops symptoms, excluding a child with symptoms will seldom keep other children from being infected (North, 1972). Trained staff, however, are needed to care for the ill child as well as room to allow the child to be comfortable, but not necessarily isolated (Loda, 1982). Every attempt should be made to comply with state and local regulations regarding care of ill infants in group settings.

Day-care centers could potentially serve as a basic unit in a national program of immunization and improved dental care and perhaps for a national program of screening for early detection of diseases and handicapping conditions. Day-care centers could provide adequate health care for infants and children who otherwise will not receive such care.

CAREGIVER'S ROLE IN THE DEVELOPMENT OF THE CHILD

As has been discussed in previous sections, the role of the caregiver is of utmost importance in the social and cognitive development of the day care child. Research has studied the relevance of the caregiver/child ratio, a consistent caregiver and the overall group size as factors in determining the quality of child care.

A caregiver to child ratio of no more than one to three is necessary for both the caregiver and the child under two. The relationship between the caregiver and the child is a responsive behavior between two individuals (Schwarz, 1979). Each learns to recognize and understand the cues that are

necessary for interaction. The caregiver is not only doing things to or for the infant, but with the infant, and the infant has the opportunity to influence his environment. Continuity in care between a specifically assigned caregiver and child allows the caregiver to provide most of the physical care and to develop a more intense, responsive relationship with the child. Since crying is the earliest way an infant has of communicating and exercising control over his world, a consistent caregiver can learn to understand the infant's variety of cries and respond accordingly. A caregiver's goals in responding to crying are essentially the following:

1. To let the infant know that his needs will be met by being given help and relief when it is needed,

2. To help the infant learn to trust other people, and

3. To help the infant develop his own resources for coping with some problems and unpleasant situations (Willis and Riciutti, 1975).

From the beginning the way the caregiver reacts to an infant's crying helps to build a secure relationship between them. The parent-child relationship which is still forming is also more secure and strengthened by the quality of his day care interactions (Rutter, 1981).

For the toddler, the caregiver to child ratio is important as well. Infants are less able to make use of interactions with peers and are more reliant on adults for play and conversation; older children are better able to organize their own activities (Rutter, 1981). For these slightly older children the caregiver still must know the needs of each child. Smaller groups of children allow the caregiver to engage in more social interaction with the children which can decrease the amount of conflict, aggression, aimless wandering and apathy as well as make the children more cooperative. The children can learn the rules for social conduct better when the messages are consistent - an objective more easily achieved with a single or limited number of caregivers and a small group size. These factors were associated with high test score gains, more verbal initiative and reflective/innovative behavior than among children in large groups with many caregivers and too many children for whom to care. Large group sizes can result in "coffee klatches" among the caregivers with less social and instructional interaction with the children (Willis and Riciutti, 1975).

Findings differ on the use of multiple caregivers as opposed to individual caregivers for children in day care. Cummings suggests that multiple caregiving leads to such weak attachments that the attachments are of no use to the child (Rutter, 1981). However, Caldwell (1982) cites that an

exclusive caregiving relationship may not be necessary in infant care. She points out that family stability may override any lack of stability in caregiving, so staff turnover may be less debilitating than feared. The stability of the group of children may also affect the adjustment of the child. More research is needed in these areas.

Research in the area of training indicates the greater importance of child related training and experience rather than years of formal education. Lead teachers (caregivers) with training and experience spent more time in social interactions with the children and less time managing the children, that is to say commanding and correcting them. A good ratio and low group size were characteristics of the center observed. As a result the children were more cooperative, more frequently involved in activities, more persistent in their work and made greater gains in cognitive tests in centers where the proportion of trained teachers was high.

The type of environment created in the day care setting is important to the job satisfaction of the caregiver. When children cried less, were less fussy and were less irritable due to a greater prevention of illness, caregivers voiced more contentment with their jobs. The amount of household responsibilities on the part of family day care providers, pay, work hours and benefits are other factors which affect the caregiver's job satisfaction.

VI. APPENDIX

Developmental Milestones

From Parent Helper: Handicapped Children Birth to Five, Maryland State Department of Education, Division of Special Education, 1981. Although the focus of this paper is infants, we include information on development to age five so that infant development might be viewed in perspective.

About 0 - 3 Months

COGNITION:
Responds to new sound with movement or with voice
Follows movement of hands with eyes
Looks at an object or person
Shows positive response to familiar sounds

COMMUNICATION:
Makes small, throaty noises
Coos expressively, vocalizes
Smiles at mother's voice
Responds vocally to a friendly person

GROSS MOTOR:
Waves hands and kicks feet when on back
Turns head to either side when lying on stomach or back
Rolls from side to back
Gains head control in upright position

FINE MOTOR:
Follows movement up, down, and across
Glances from one object to another
Grasps object when placed in hand
Watches movement of own hands

SELF-HELP:
Demonstrates sucking reflex
Opens mouth to bottle or breast and sucks
Demonstrates gag reflex

SOCIAL:
Enjoys being tickled and fondled
Smiles spontaneously
Smiles in response to smile, voice, or touch
Expresses pleasure with physical activity
Quiets when picked up
Maintains brief eye contact during feeding

About 3 - 6 Months

COGNITION:
Repeats action on objects
Recognizes mother
Looks at hand and object when grasping
Uses visually directed reaching
Secures partially hidden object
Imitates cooing sounds
Uses movement or sound to continue an interesting game

COMMUNICATION:
Turns head to locate sounds and voices
Responds to voice by sound or movement
Vocalizes sound patterns; begins babbling
Varies crying to different stimuli

GROSS MOTOR:
Pushes up from ground, lifts head and chest
Pushes self to sitting position; sits alone momentarily
Rolls from stomach to back
Straightens hips, lifts legs when on stomach
Reaches for feet and brings to mouth

FINE MOTOR:
Holds object directly in front, both hands
Uses fingers and palm to hold objects
Bangs objects in play

SELF-HELP:
Eats baby foods from spoon
Anticipates feeding with increased activity
Reaches for and holds bottle

SOCIAL:
Laughs aloud often
Notices strangers
Voices pleasure or displeasure
Approaches image image in a mirror
Cries when left alone or put down
Likes physical play
Shows awareness of strange environments

About 6 - 9 Months

COGNITION:
Imitates simple, familiar gestures (e.g. shaking toy)
Responds to names
Uncovers toy that has been partially hidden
Tracks and locates object falling out of view

COMMUNICATION:
Vocalizes consonant/vowel syllables and two syllables
(e.g., gaga)
Engages in vocal play; uses word-like expressions
Uses vocalization for attention
Responds to name vocally

GROSS MOTOR:
Bears weight in standing position
Sits unsupported and reaches for toys
Lifts head when on back
Rolls from back to stomach
Crawls forward with stomach on floor
Bounces when held in standing position
Maintains balance on hands and knees
Assists in pulling to standing position

FINE MOTOR:
Grasps with thumb and side of index finger
Moves wrist to manipulate toy or object
Reaches for and obtains objects 10"-12" away
Retains one cube when given another
Transfers objects from one hand to the other
Claps hands

SELF-HELP:
Begins chewing movements
Reaches for and holds bottle
Drinks from a cup with help
Manipulates finger foods
Holds, bites, and chews biscuit

SOCIAL:
Plays peek-a-boo
Expresses pleasure when playfully handled
Reacts playfully to mirror image
Plays unattended for short periods of time
Understands and adapts to social signals (smile, harsh tone)
Shows displeasure when familiar toy is removed

About 9 - 12 Months

COGNITION:
Plays simple games, (e.g., pat-a-cake)
Acts on or with visible toys or objects
Moves to reach a desired object
Finds a completely hidden object
Looks at pictures in book
Touches adult or object to cause action or movement

COMMUNICATION:
Plays pat-a-cake; waves bye-bye
Imitates coughs, tongue clicks, lip smacks

Stops activities in response to "no"
Repeats what adult says
Understands a few words and gestures
Uses jargon or non-meaningful monologue
Imitates new words

GROSS MOTOR:
Creeps forward on hands and knees
Pulls to standing, using stable support
Sits from standing with help and then alone
Walks holding on to furniture
Walks with support
Lets go of support and stands alone

FINE MOTOR:
Uses index finger alone
Purposely releases an object
Makes marks on piece of paper with pencil or crayon
Grasps with finger and thumb
Pokes at objects with index finger
Bangs spoon or cup

SELF-HELP:
Ceases drooling
Licks food off utensil or from sides of mouth
Finger feeds for part of meal
Usually weaned from breast or bottle
Drinks from cup, with some liquid spilling from mouth

SOCIAL:
Laughs aloud in play with adult
Responds appropriately to adult's change of mood
Temporarily responds to "no"
Shows preference for one toy over another

About 12 - 18 Months

COGNITION:
Places one round shape in a form board
Uses a tool such as a stick to obtain objects
Recognizes shapes in a puzzle board
Imitates unfamiliar sound patterns
Imitates unfamiliar gestures
Points to an object named or wanted
Imitates at least one facial gesture
Attempts to find causal mechanism to operate toy

COMMUNICATION:
Shakes head from side to side to mean "no"
Uses first spontaneous words
Uses one word to express an idea (e.g., "milk")
Follows simple command
Performs requested actions

GROSS MOTOR:
Makes four or five stepping movements in place
Creeps upstairs
Stands alone in the middle of floor
Walks backwards and sideways
Climbs upstairs, one hand held
Creeps downstairs backwards
Rises to standing position independently
Walks alone

FINE MOTOR:
Places cubes in a cup
Uses both hands to perform same action
Holds crayon and scribbles on paper
Stacks one block on top of another
Builds tower of three or four cubes

SELF-HELP:
Picks up cup and drinks
Spoon feeds without many spills
Removes simple garments on request
Cooperates in dressing by moving limbs
Indicates wet or soiled diaper

SOCIAL:
Repeats a performance laughed at
Exhibits specific emotional behaviors such as fear, joy, and anger
Gives affection - returns a kiss or hug
Makes some decisions for self

About 18 - 24 Months

COGNITION:
Identifies parts of own body
Places three shapes correctly in a form board
Names five parts of the body
Attends to nursery rhymes
Points to pictures in a book upon request
Imitates sounds, words, or body movements
Activates objects directly
Finds object from indirect visual cues

COMMUNICATION:
Uses two words to describe actions
Uses one word for many similar things
Refers to self by name
Uses two-word possessives (e.g., "Daddy car")
Follows verbal instructions
Uses familiar names of objects

GROSS MOTOR:
Walks downstairs with support

Jumps in place
Pushes/pulls a light object
Sits directly in small chair
Runs length of the room without falling
Stands on one foot momentarily
Picks up toy from floor when standing-up

FINE MOTOR:
Imitates vertical crayon stroke
Places three shapes in a form board
Manipulates an object with fingers and thumb alone
Imitates stacking tower of four cubes
Turns pages of book one by one

SELF-HELP:
Zips and unzips large zipper
Attempts to put on shoes
Removes all clothes without help
Attempts to put familiar objects away
Unwraps enclosed food such as crackers
Ceases activity for naptime

SOCIAL:
Cries or fusses for short period when parents are absent
Plays alone for extended period of time
Enjoys accompanying adult on short walks
Shows intense positive and negative reactions
Becomes easily frustrated
Shows pride in actions
Pays attention to other children

About 24 - 36 Months

COGNITION:
Matches familiar objects, sorts objects in two categories
Enjoys short stories read from picture book, describes simple pictures
Understands one-to-one relationship of sets up to ten
Points to "one" and "many"
Exhibits a sense of ownership, (e.g., "It's mine")
Recognizes self in mirror
Engages in domestic make-believe play
Places five shapes correctly in a form board

COMMUNICATION:
Joins in songs and rhythm
Uses own first name, says complete name
Uses three-word phrases
Uses word "no" appropriately
Uses simple pronouns
Asks questions with appropriate tone
Carries out two-step commands
Uses regular plurals

GROSS MOTOR:
Walks up and down stairs holding rail
Stands on balance beam with assistance
Kicks ball without support
Runs and jumps
Throws ball overhand
Rides tricycle using pedals
Balances on one foot
Walks up stairs with support, alternating feet

FINE MOTOR:
Imitates drawing horizontal and vertical strokes
Snips or makes small cuts with blunt scissors
Strings three or four beads
Completes form board of five or more pieces
Begins to hold crayon appropriately
Builds tower of nine blocks

SELF-HELP:
Gets drink unassisted
Eats an entire meal with spoon, begins to use a fork
Toilets with some help and has only occasional accidents
Puts on simple clothing (e.g., hat, pants, shoes, socks)
and then all clothes except for buttoning
Washes and dries hands with assistance
Brushes teeth with some assistance

SOCIAL:
Varies mood in response to reactions of others
Plays or works on own project when near other children
Initiates own play activities, plays in simple games
Indulges in pretend or make-believe play
Requests that specific stories be read
Avoids hazardous situations
Attempts to take turns

About 36 - 48 Months

COGNITION:
Matches two or three colors
Knows concepts big/little, fast/slow, long/short
Tells a simple story
Matches pictures of like objects
Rote counts up to three
Completes a form board of five or more pieces
Discriminates size, weight, and length

COMMUNICATION:
Asks questions beginning with who, what, or where
Uses possessives correctly (e.g., "Mommy's car")
Uses regular past tense, prepositions in, on, and under
Learns to whisper
Uses normal loudness and tone

Uses language in imaginative play
Uses sentences most of the time

GROSS MOTOR:
Catches a bounced ball
Walks downstairs without support alternating feet
Jumps forward without falling
Throws ball overhand
Stands on balance beam unassisted
Walks entire length of tape line on floor
Climbs to top of slide and slides down

FINE MOTOR:
Strings 1/2" beads
Copies a circle
Puts together objects requiring fine muscle control
Cuts along 1/4" line with a continuous opening and closing motion
Laces shoes - not necessarily with pattern

SELF-HELP:
Buttons and unbuttons larger buttons
Completely dresses with verbal assistance
Wipes up spills
Brushes teeth with verbal assistance
Washes and dries hands independently
Completely cares for self at toilet

SOCIAL:
Initiates play in group and remains to play
Shares toys upon suggestion
Performs simple errands
Plays cooperatively with other children
Consciously identifies with parents
Shows sympathy and concern when appropriate
Enjoys helping and participating

About 48 - 60 Months

COGNITION:
Knows own age
Knows day and night
Matches and names four primary colors
Counts 10 objects; answers how many on request
Sequences pictures in order of occurrence
Answers questions about a story being read
Names three objects from memory
Chooses own categories for sorting

COMMUNICATION:
Regularly uses pronouns (e.g., he, she) and possessive pronouns

Uses some adverbs
Verbally calls attention to own performance
Carries out series of three unrelated commands
Uses future tense
Names attributes of objects (size, shape, color)
Uses "no" and "not" appropriately
Uses contracted negatives (e.g., can't, don't)

GROSS MOTOR:
Gallops
Walks full length of balance beam without falling
Kicks rolling ball toward target
Skips, alternating feet
Hops on one foot
Catches a thrown ball
Walks on tiptoes for 10 feet

FINE MOTOR:
Draws a picture
Demonstrates hand preference
Copies shapes (circle, square, triangle, rectangle) from example
Draws stick figures
Cuts out a circle and other simple shapes

SELF-HELP:
Blows nose independently
Serves self at table from bowl without spilling
Eats with spoon and fork skillfully
Stays dry overnight
Distinguishes between front and back of clothing
Plays in yard with periodic monitoring
Hangs coat on hook

SOCIAL:
Calls attention to own performance
Uses social response (e.g., please, thank you, raises hand, stands in line)
Chooses another child to play with
Talks about family
Prefers to be with peers rather than adults
Controls emotions and expresses them in acceptable ways

About 60 + Months

COGNITION:
Matches sets of items to numerals, 1 - 10
Sequences up to five daily activities
Retells a brief story
Gives home address
Knows left from right

COMMUNICATION:
Tells story by reading the pictures.
Asks meaning of abstract words
Speaks fluently and correctly, except for confusions of
s, f, th

GROSS MOTOR:
Jumps rope
Roller skates
Hops 2 - 3 yards forward on each foot separately
Jumps on toes only from height of 12" landing
Runs with arms swinging in opposition to feet

FINE MOTOR:
Prints capital letters and simple words with frequent
reversals
Uses appropriate hand placement while cutting and writing
Laces own shoes
Prints numbers 1 - 5

SELF-HELP:
Brushes and combs hair unassisted
Puts toys away in box
Dresses and undresses alone
Crosses street safely

SOCIAL:
Comforts playmate in distress
Plans and builds constructively
Understands need for rules and fair play
Relates clock time to daily schedule

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